

APPENDIX

NOTES FOR FOMC MEETING
AUGUST 16, 1988
SAM Y. CROSS

Just before the June FOMC meeting, the dollar rose substantially and it has remained well bid throughout most of the intermeeting period, although the dollar did slip some last week and again today following the release of data showing a larger trade deficit. But for the period as a whole the dollar has been well bid, and most of the dollar's rise has been against the mark and associated continental currencies. Since the June meeting, the dollar has risen from DM1.82 to DM1.88, or about 3-1/2 percent. Also, all of our intervention has been to sell dollars for marks. We've sold just over \$3 billion and the Bundesbank has sold as we have, if troop dollars are included.

Against several other currencies, however, the dollar has been more stable. Today's exchange rates for the yen, sterling, and the Canadian dollar, for example, are only marginally different from the levels of seven weeks ago. As a result, these currencies, too, have strengthened against the German mark and other continental currencies. These three countries--Japan, the UK, and Canada--all are showing vigorous economic growth and, with the notable exception of Japan, they have high nominal interest rates.

The movement of the dollar/mark exchange rate over recent months reflects the markets' growing confidence in the U.S.

situation, together with disappointment about investment returns in Germany. As for the United States, dealers have been impressed with evidence suggesting that external adjustment is proceeding, as well as a feeling that the authorities want a stable or rising dollar during the pre-election period. They see the brisk economy and expectations of more inflation as implying higher interest rates here in the months ahead. By comparison, the German economy is not all that robust and investment prospects are not all that promising. Interest rates are still relatively low in nominal terms, and the prospects for capital gains coming from an expanding economy, declining interest rates, or a rising exchange rate look remote.

One mechanism that has pushed the dollar up is the covering of dollar positions, not only by foreign exchange traders but also investors and others. Looking back to the start of the year, there must have been large-scale short positions in the private sector, since our 1987 current account deficit was financed or even over-financed by the central banks. As the dollar moved up, first in response to the vigorous G-7 intervention and then in response to the improving prospects for the currency, many corporate customers and institutional investors sought to reduce their short positions, by adjusting their hedges and commercial leads and lags and other means.

We have intervened to try to limit the dollar's upward movement. The idea is to avoid an abrupt upsurge in the dollar/mark that might attract even more covering activity that would ratchet up the dollar to higher and perhaps unsustainable

levels. Such a result could impede the trade adjustment we require and possibly cause volatility that could spill over into other financial markets.

In these circumstances, the U.S. has intervened and since your last meeting we have sold \$3.1 billion. All of these sales occurred before the recent discount rate increase. The result of these operations is that we have put back about one-third of the \$9.4 billion which we took out of the market when we were resisting the dollar's fall during the 14 months after Louvre. With the dollar having risen substantially from its low point in early January against all currencies, it is now above the levels prevailing at the time of the Louvre in terms of the mark, although it is still well below the Louvre levels in terms of the yen.

Following last Tuesday's discount rate increase, the dollar rose during the course of that day, but in following days retreated, without official intervention, to levels below those prevailing before the announcement. We have naturally wondered why the dollar has slipped back. One factor may be that, although the timing of the move caught the market by surprise, the fact that the Fed would be willing to tighten when necessary was widely anticipated; and it may be that the market thought the Fed knew something they didn't, and the inflation danger is worse than they thought. The market may also have been affected by expectations, in light of commentary by European officials, of offsetting interest rate increases in Germany and elsewhere, and, in addition, there may have been a view that the dollar was at

levels likely to lead to a strong G-7 response.

Looking back, actual or anticipated intervention by the major central banks seems to have been a significant factor in keeping the dollar from rising more strongly, and I suspect the market will continue to pay a great deal of attention to the G-7's effort to foster exchange rate stability.

Mr. Chairman, since the June meeting, we have sold \$1.4 billion against marks on behalf of the Federal Reserve. We also purchased from customers a very small amount of currencies to augment balances--a total of \$11.6 million equivalent of yen and \$17.9 million equivalent of marks. I would request approval of these transactions.

In other operations, the Committee earlier approved our participating with Treasury in purchasing up to \$3 billion equivalent of yen directly from and one-half of that amount has now been purchased. In addition, on August 1 the Bank of Mexico drew the entire \$700 million of its Federal Reserve swap facility, as authorized by FOMC vote on July 28, and also drew the entire \$300 million of its Treasury ESF swap facility. The Bank of Mexico is scheduled to repay both swaps on September 15.

There are three items to report on other Treasury ESF swaps:

- On July 1, the National Bank of Yugoslavia repaid \$16.1 million of its outstanding \$50 million swap.
- On July 29, a special \$232.5 million swap facility was arranged for the Central Bank of Brazil as part of a \$500 million bridge financing arranged with the BIS and

other monetary authorities.

- On August 4, Treasury announced it would help arrange loans to Argentina of up to \$500 million to bridge to future World Bank loans consisting of ESF funds and a BIS facility for other creditors.

FOMC NOTES
August 16, 1988

Joan E. Lovett

Following the last Committee meeting, the allowance for adjustment and seasonal borrowing was raised by \$50 billion to \$600 million. While this objective was maintained during the intermeeting period, Federal funds rates were persistently firmer than would normally have been associated with the allowance. For much of the period, market expectations exerted an upward tug on rates while Desk operations sought to resist that tug in order to keep expectations from becoming entrenched.

Right after the last meeting, it was anticipated that funds would trade in the area of 7-1/2 percent or a shade higher once quarter-end pressures had passed. At the July 19 conference call, however, it was reported that market psychology had lifted the anticipated level to a 7-5/8 - 7-3/4 percent range and, by the August 5 conference call, it was noted that funds were trading in the area of 7-3/4 to 7-7/8 percent. As you know, the increase to \$700 million of path level borrowing reported at that call never took on operational significance with the move on the discount rate following so closely. With the 6-1/2 percent discount rate established on August 9, it was anticipated that \$600 million of borrowing would be associated with Federal funds in the area of 8 to 8-1/4 percent.

Desk operations were geared to providing reserves early in each of the three full maintenance periods. A large need was seen in the first period but fairly modest ones thereafter. The strategy was to let excess reserves accumulate early on so as to

blunt the firming tendency in the money market. That approach seemed to be working in the first period as Fed funds rates softened gradually toward -- and a bit below -- anticipated levels. In that context, an improbably large upward revision to required reserves late in the period was viewed with considerable skepticism. The size of the revision was highly unusual in itself for so late in the period. It had the effect of introducing about a \$10 billion additional need and, if correct, of virtually eliminating the accumulated excess reserves for the period. Both outcomes seemed suspect in light of the quite comfortable money market then prevailing. Consequently, the Desk added only a modest amount of additional reserves. In fact, the required reserves estimates proved to be correct, surprising both the banks and the Desk. Funds firmed quite late and borrowing bulged. Borrowing had already been running high because of heavy use of the window over the July 4 weekend and the Wednesday bulge brought the first period average to \$1.3 billion. Borrowing averaged about \$600 million in each of the next two periods. With the Desk continuing to meet reserve needs early, it was vulnerable to some overshoot and, in fact, drained modest amounts as both periods ended. Borrowing is averaging \$560 million so far in the current period, with funds coming in at about 8.15 percent until refunding settlement pressures yesterday lifted the average to 8.20.

Bills were acquired from foreign accounts early in the intermeeting period when reserve needs were thought to be larger. However, the bulk of the reserve adjustments for the period were

made with temporary operations. On a few occasions, System RPs were used on the more modest scale usually associated with customer-related RPs in an effort to confront upward rate pressure.

Why did rates firm beyond expectations? The bulge in borrowing late in the 7/13 period was probably a contributing factor. The level itself was considered an aberration by market participants but it likely produced more cautious reserve management strategies, at least on the part of the banks that borrowed. In addition, the Chairman's Humphrey-Hawkins testimony on July 13 planted seeds of caution in two respects. The first was his reference to the advisability of monetary policy erring on the side of restraint. The second was his indication that the FOMC's central tendency expectation for real growth in 1988 was 2-3/4 - 3 percent. Market participants were unsure whether Committee members believed that the implied slowing required over the second half of the year would occur naturally or in response to further monetary actions. Data on the economy released throughout the period began to cast doubt on the likelihood of the former scenario. Against this background, while the reserve numbers were seen in hindsight as indicating that the Desk was leaning against funds rate pressures as much as possible within its reserve objectives, it was perceived as likely that this effort would, at some point, be abandoned.

Thus, while anticipating and building in a firmer System stance, the market was nonetheless surprised by the discount rate change on August 9. There had been periodic rumors

of such a move over the interval, particularly on the heels of strong employment reports, but most participants did not think imminent action was likely. Consequently, yields adjusted further following the move. Treasury bill rates, which had already risen by 25 to 50 basis points, rose a further 10 to 25 basis points. Three- and six-month bills were auctioned yesterday at 7.05 and 7.51 percent, respectively, compared with 6.59 and 6.75 percent just before the last meeting. The Treasury has ended its prolonged period of bill paydowns and, in fact, raised about \$8-1/2 billion of new cash in the bill market during the interval -- about \$1-1/2 billion through larger regular auctions and \$7 billion through a longer-term cash management bill sold in conjunction with the August refunding. These bills mature next April, giving an assist to indicated needs ahead and running off when tax receipts will have come in. Rates on private short-term paper -- CDs, commercial paper and bankers' acceptance -- rose by about 65 to 100 basis points. The prime rate rose by a full percentage point to 10 percent in two stages -- the first right after the Humphrey-Hawkins testimony and the second following the rise in the discount rate.

Yield gains on intermediate and longer maturities were more moderate over much of the period but began to catch up toward the end, leading to a net rise of about 50 to 60 basis points. With data on the economy looking pretty robust, inflation concerns were never far from the surface. The June employment report on July 8 and the rise in the GNP price measures reported on July 27 were particularly unsettling in this

regard. Still, the dollar's strength was lending support and technicals were very firm. There had been little new supply of Treasuries or corporates for much of the period and the strong dollar was encouraging demand from foreign investors. Moreover, it appeared increasingly certain that no bonds could be offered by the Treasury in August and perhaps for some time beyond. Against this background, the Treasury's announcement on August 3 of plans to sell \$22 billion of coupons at the quarterly refunding -- evenly divided between 3- and 10-year issues -- caused barely a ripple.

The strength depicted in the employment report on August 5 brought market fundamentals back to the forefront, however, as the rise in nonfarm payrolls came to a combined gain of over 800,000 for the two months ending in July. Following the rise in the discount rate, the status of the dollar came into question as participants were unsure about the response from foreign monetary authorities. Expectations of demand from foreigners began to falter and, with two main props to the market eroding -- firm technicals and strong foreign support -- yields backpeddled quickly. The distribution of the 3-year issue proceeded relatively well at the higher yield levels but the 10-year is still being digested. Japanese interest in the auctions was a bit modest relative to past experience, especially given the absence of a long bond.

As to the current stance of Fed policy, perceptions generally center on a borrowing objective of \$600 - \$650 million and funds trading in an 8 to 8-1/4 percent range, gravitating

more toward 8-1/8 - 8-1/4 percent. The economy is seen to be strong but not out of control. The latest news on producer prices was a disappointment, suggesting that increased price pressures may be closer at hand. While at this juncture there is little anticipation that a further dramatic policy move is imminent, most participants believe that the Fed has some further snuggling to do over the balance of the year.

Michael J. Prell
August 16, 1988

FOMC BRIEFING

In the broadest terms, the thrust of our economic forecast has not changed greatly from what it has been for a while. However, the events of recent months have, in effect, upped the ante noticeably. Growth has been stronger than we anticipated, levels of resource utilization have risen faster, and it appears that the policy action needed to rein in inflationary pressures may be greater than we earlier thought. Indeed, it was as recently as the March Committee meeting that we were predicting that the fed funds rate would peak below 8 percent.

In last month's chart show, we indicated that we expected to see business activity begin to decelerate this summer. The information received since then, however, has run counter to that view. The June and July labor market data are the most important evidence on this score, with employment rising sharply and the unemployment rate edging lower on balance.

Since the Greenbook was published last week, the incoming data have only reinforced the impression of strength. Revised figures on retail sales indicate that consumer spending was higher than the Commerce Department estimated for the second quarter. And although the gain in sales reported for July was modest, it appears that we are on track with our forecast for better than 2-1/2 percent growth in real consumer outlays in the third quarter.

Meanwhile, last week's data also revealed that business inventories probably grew less in the spring than Commerce thought. Inventories look leaner at midyear than we had expected them to be, and we now believe that efforts to build stocks will be positive factor in aggregate demand over the next few months. In our June forecast, a slowing in non-auto inventory accumulation contributed to the projected second-half deceleration of GNP.

The picture also has changed in the automotive sector. Sales of cars and light trucks have held up well, and in addition, the Commerce Department has revised its seasonal factors. Consequently, it no longer looks like car production will exert the appreciable drag on measured GNP growth in the current quarter that previously was anticipated.

The July data on industrial production are indicative of the continuing strength of the manufacturing sector generally. Output is estimated to have risen another eight-tenths of a percent last month and growth in this quarter seems likely to exceed by a substantial margin the 4-1/4 percent annual rate of increase registered in the first half. The gains last month were widespread, but especially noteworthy is the further evidence of strong demand for capital goods. Production of business equipment rose 1 percent, matching the average increase in the preceding three months.

We have received only a few pieces of statistical information on capital spending since the last meeting. What we have received, coupled with the anecdotal information, suggests to us that, not only will business fixed investment show the kind of second-half strength

that we had been expecting previously, but likely will be carrying greater momentum into 1989. Real BFI is now projected to rise 4-1/2 percent next year, as compared with 2-1/4 percent in our previous forecast. It is our sense that rising utilization rates and profits are prompting a good many manufacturers to enlarge their capital spending programs, which will push up outlays for both equipment and industrial structures. The historical evidence suggests that capital spending is very insensitive to interest rate movements in the short run, and we think that it would take stronger fears of recession or of substantial dollar appreciation to reverse the current underlying momentum of investment.

The strengthening in this key element of domestic spending works to offset the effects of a higher dollar on output growth in 1989 -- and helps explain the upward revision in our projection of interest rates. We now are looking for a federal funds rate in the 9-1/2 percent range by next spring and Treasury bond yields in the vicinity of 10-1/2 percent. This isn't all that much higher than in the June chart show, but it does signal our judgment that the economic winds against which the Fed is attempting to lean may be considerably stiffer than we previously had anticipated.

Real GNP growth in the second half of 1988 is now projected to be about 2-1/2 percent, just a little faster than in June. However, that figure includes the effects of the drought on farm output, which look to be substantially larger now. If one abstracts from those losses, growth is more like 3-1/4 percent, and consequently we are expecting that the unemployment rate will remain in the 5.3 to 5.4

percent area -- about a quarter point lower than in the last forecast. Moreover, capacity utilization rates, now approaching 84 percent for total manufacturing and exceeding 87 percent in the primary processing industries, are higher than we previously expected. Under the circumstances, we believe that pressures on resources are great enough to pose the risk of a serious acceleration of inflation.

The second-quarter data on wages and total compensation confirm that there already has been a pickup in labor cost inflation since last year. Depending on which series you look at, compensation growth over the past year has been 1/2 to 1-1/2 percent faster than in the preceding 12 months. Reports of shortages of workers have become more numerous, as have those of substantial jumps in pay to attract or hold employees.

On the price side, the indications of acceleration are less clearcut. The prices of some basic industrial commodities actually have softened recently, probably in part because of the dollar's appreciation. However, as we look at final goods and services, we think there are at least hints of some step-up in the trend of price increases. The most recent report on producer prices, released on Friday, certainly was striking, with the index for all finished goods excluding food and energy up 0.6 percent and the consumer component of that measure up almost a full percent.

Despite the fact that we are showing a slowing in growth next year that produces an upcreep in the unemployment rate and a slight decline in capacity utilization, we have forecast a rise in compensation of about 5 percent in 1989 and an increase in GNP prices of about 4-1/2 percent. Both of these inflation numbers have been raised almost 1/2

point since our last projection. In making this forecast, we have continued to discount considerably the more pessimistic predictions of many econometric models, but I must say that we do so with a greater uneasiness. Those models no longer appear to have had so great a proclivity to over-predict, now that the hourly compensation figures for 1985 to '87 have been revised upward.

I would like to conclude my remarks with a couple of legislative notes. First, we have not yet incorporated into our forecast a hike in the federal minimum wage. There is a clear risk that the Congress will pass a bill. Our assessment is that the effect of such a law would be to add a couple of tenths to the rate of compensation increase in 1989.

The other legislative area that comes to mind increasingly as we look at the possibility of still higher interest rates is fiscal policy. Our model simulations suggest that, if the Greenbook forecast is correct in its assessment of underlying demands for goods and services, holding short-term rates at current levels would prevent the anticipated deceleration in growth, and cause inflation trends to look considerably worse in 1990.

On the other hand, the models suggest that much greater monetary restraint than we have assumed would be required if there were a desire to begin reducing inflation rates before 1990. The interest rates we already have in our forecast probably would be enough to exacerbate significantly the pressures on the thrift industry in particular, and we are all aware of the financial exposures elsewhere in the economy. Moreover, pushing up real interest rates might tend to

boost the dollar, which may not be attractive. Under the circumstances, early action to cut the federal budget deficit looks to be a possible key to easing the apparent tension between the objectives of reducing inflation and fostering continued external adjustment.

E.M.Truman
August 16, 1988

FOMC Presentation -- International Developments

As Sam Cross has already reported, the Commerce Department this morning released its preliminary estimate of the June trade deficit based on the cif valuation of imports and Census reports. The deficit was \$ 12.5 billion, and the May deficit was revised down to \$ 9.8 billion from the preliminary estimate of \$10.9 billion. Both agricultural exports and oil imports declined in June. Non-oil imports rose sharply after quite a large downward revision in the May figure; non-agricultural exports declined slightly in June, but exports in May were revised up.

Taken together these new figures imply a very slight increase in the trade deficit in the second quarter compared with the figures BEA used in preparing the preliminary estimate of real GNP. In 1982 dollars, the revision might subtract a tenth of a percentage point, at an annual rate, from the estimated growth rate of real GNP in the second quarter.

The May-June data were broadly in line with our own estimate that was used as the basis of the Greenbook forecast. That outlook involves a continued, but more gradual, narrowing of our trade and current account deficits through the end of 1989. In that projection, the trade deficit reaches \$100 billion at an annual rate and the current account deficit reaches about \$120 billion at an annual rate in the fourth quarter of next year.

Two key elements influenced the staff forecast prepared for this meeting. First was the better-than-expected performance of the

trade deficit in recent months, especially with respect to non-oil imports. Second was the stronger dollar.

Considering, first, near-term trade developments, it is our judgment that some of the decline in non-oil imports observed in the second quarter is likely to be temporary. In part, it appears to have been associated with the modest inventory correction that took place in those months. Moreover, inventories of Japanese vehicles at dealers in the United States were at relatively high levels at the start of the new quota-year in April. Therefore, it is likely that the seasonal pattern of automotive imports from Japan will change this year even if the total for the year does not change much. Indeed, through June, shipments from Japan were running about 15 percent below the front-loaded pace of last year.

Although such considerations lead us to conclude that part of the decline in non-oil imports in the second quarter was temporary, revisions in the historical data suggest a lower volume of non-oil imports in the recent past, and we are more confident that some of the weakness in non-oil imports will persist for a while. At the same time, the recent robust behavior of nonagricultural exports tends to reinforce our view that a substantial correction of the external accounts is underway, even if it is unlikely to continue at the torrid pace of the first half of this year.

This improving trend in our external accounts was one of the factors, along with a favorable perception of the stance of U.S. monetary policy, that led to the strengthening of the dollar over the past couple of months in exchange markets. In July, the average level of the dollar in terms of the other G-10 countries' currencies was about 7-1/2 percent above the average in May.

In constructing our forecast, we had to reach a judgment about how the dollar is likely to fare in the future. We built into our forecast a projection that holds the dollar roughly flat at its July level on average for the balance of the year. In 1989, the dollar is projected to resume its decline at a moderate rate. On balance the dollar's average level over the forecast period is about 8 percent higher than in the last Greenbook. As a consequence, in the fourth quarter of 1989, the dollar's foreign exchange value in real terms against other G-10 currencies is projected to be essentially the same as it was in the fourth quarter of last year, though the dollar would be a bit lower in real terms against the currencies of the major developing countries.

Three elements influenced our thinking about the dollar. First, as I already noted, we concluded that the adjustment in our external accounts was proceeding somewhat better than we had expected. Second, we continue to believe that sustained external adjustment cannot be achieved with the dollar at its current level, and at some point its decline will resume. In other words, we suspect that the euphoria in the foreign exchange market may have been a bit overdone. Third, we incorporated into our projection for the dollar the effects of the higher level of U.S. interest rates that are now assumed in the basic forecast.

The higher dollar compared with the last Greenbook, of course, has implications for our forecast. I thought it might be helpful to give the Committee some sense of the timing and the magnitude of the implications for the pressure of aggregate demand, where the estimates are based on the staff's econometric models. I would emphasize, however, that these models are generally more useful in helping us to

understand the overall magnitudes of effects than in predicting their precise time patterns.

As a first approximation, one can think of the new projected path of the dollar relative to the path in the last Greenbook as a discrete real appreciation of the dollar of about 8 percent in the third quarter of 1988. Our models suggest that such an appreciation should reduce the level of real GNP by about a quarter of a percentage point in the first half of 1989 and by about half a percentage point in the second half of the year. We would expect most of the impact would be felt by the end of the forecast period.

In our forecast, two conflicting influences tend to modify somewhat the effects of the dollar's appreciation. First, the strong near-term performance of the trade balance that I discussed earlier led us to delay the impact of the stronger dollar for a couple of quarters; in effect, the projection starts off from a better level of real net exports. Second, because the higher level of the dollar is in part caused by the higher projected path of U.S. interest rates and because we are net debtors on portfolio investments, net service payments were increased somewhat in real terms; this adds to the drag from the higher dollar on real net exports of goods and services. However, lest one think that the stronger dollar implies that real net exports become a overall negative in our forecast, I would point out that about one third of the expansion in real GNP in 1989 is still projected to come from an improvement in real net exports.

Finally, one might be interested in the implications for the staff's outlook of a projection for the dollar in which it essentially remains at its recent elevated level throughout the projection period but without requiring changes in U.S. monetary or fiscal policies to

accomplish that feat, other than those incorporated in our basic forecast. Since the dollar now is expected to be stable around its recent level through yearend and decline only moderately thereafter, a stable dollar all the way through the end of 1989 has only a small impact on demand pressures at the end of the forecast period — that is it would reduce the level of real GNP in the second half of the year by about a quarter of a percentage point. Most of the impact comes in 1990.

In other words, if the dollar were to remain stable around its current level, the near-term reduction of demand pressures would be minimal. On the other hand, if the dollar were to appreciate substantially further in the next couple of months, a significant impact might be felt by the middle of next year.

Mr. Chairman, that concludes our presentation.

FOMC Briefing
Donald L. Kohn
August 16, 1988

The rise in short-term interest rates as policy firmed over the intermeeting period was accompanied by developments in other key financial variables that may have important implications for interpretation of the extent of monetary restraint and its possible effects on the economy. One such development was the rise in bond yields, which at least in the Treasury market, more than matched the increases in short-term rates. Another was the strength of the dollar--at least until this morning--and a third was the slowing trend of money growth.

Some increase in bond rates is to be expected when short-term rates rise; even if investors are led to revise down their estimates of short-term rates some time in the future, that time usually is sufficiently remote that the effects of a higher near-term course for rates generally dominates. But most often, the increase in long-term rates is less than that for short-term rates. In recent weeks, the outsized rise in Treasury bond yields seemed primarily a reaction to the implications of incoming economic and price data for the strength of demands on financial markets and the response of the Federal Reserve. A substantial portion of the increase in bond yields preceded the discount rate increase, which itself may have been partly viewed as symbolic of the depth of the Federal Reserve's concern about economic and inflation prospects, and we have seen further increases in the last few days following PPI and trade data..

The net result is that judging from the yield curve, the market apparently sees us as still having to do at least as much additional

tightening as before the latest moves. As Mike has already indicated, this information has had a similar effect on the greenbook forecast, in which rates are seen to need to rise to higher levels than were previously thought necessary to achieve about the same degree of restraint on inflation pressures.

Contributing to the view that substantial rate increases are still in store may be a sense that real rates have not risen very much. To be sure, increases in nominal interest rates, by themselves, could have important effects on the spending of some debtors or potential borrowers--especially those whose ability to meet additional interest expense is constrained by limited access to credit or liquid assets. For many others, however, it is likely that the level of real interest rates is the more important variable in spending decisions. What limited information we have from surveys reinforces the perception that inflation expectations have increased substantially since the early spring so the rise in real rates has been considerably less than the rise in nominal rates. Indeed, real rates may be only a little higher than levels prevailing through much of last year--levels that were consistent with robust growth in 1987 and so far in 1988, despite the destruction of wealth in the stock market.

Some other indicators, however, suggest the possibility of a somewhat greater effect of recent policy, at least on expectations. Commodity prices--outside of food and energy--have been relatively stable for a considerable time, perhaps indicating some check on demand pressures. One factor contributing to the behavior of commodity prices, may have been the strength in the dollar. That strength may be related

in part to monetary policy, and in part to progress in the trade balance, as Ted has discussed. The weight given to these two influences in the dollar's recent behavior, and how they affect future dollar movements will have an important bearing on its relationship to demand in the economy and the need for monetary restraint. A dollar that stayed high or rose further in response to monetary restraint would be an important channel to damp demand in 1989 and beyond; a dollar that remained strong principally because over time the external balance was improving more rapidly than expected, though helping to damp inflation pressures from rising import prices, might not greatly reduce the degree of additional monetary tightening needed to contain inflation.

Finally, the money stock, especially M2, has decelerated substantially in July. While some of this reflected special factors, we expect only a limited rebound in August and September. In the bluebook, we have revised down our projection for M2 growth over the June-to-September period from 5-1/2 to 3-1/2 percent, with much of that revision accounted for by the effects of the rise in interest rates over the last six weeks. These effects, along with those of the earlier tightening, will continue to depress money growth in the fourth quarter. Even in the absence of further increases in rates, we would expect growth over the last four months of the year to be around 4 percent, bringing expansion for 1988 to, or even a bit below, the midpoint of the annual range. Moreover, under the income and interest rates of the staff greenbook forecast, we project M2 growth in 1989 well down in its tentative range, perhaps not far above its lower bound.

While long-run trends in money and prices track each other reasonably well, in a cyclical context interpretation of money stock behavior, such as the sluggish growth projected, depends importantly on the conditions in which it occurs. In the staff forecast, those conditions include strong underlying demands on the economy and a monetary policy that moves to damp those demands to contain inflation. The rising interest rates produced in those circumstances interact with an interest-sensitive demand for money to produce substantial increases in velocity, enabling relatively modest money growth to support considerable expansion of income. Under different circumstances very different money growth rates might be needed to achieve the Committee's economic objectives. If, for example, demands were weak so that interest rates dropped substantially, stronger money growth might be needed for a time to sustain the expansion and would have little implication for inflation performance. On the other hand, in the face of even more robust demands, or if the Committee were to opt for faster and more certain progress against inflation, even slower growth than now anticipated might be needed. The staff forecast implies declines in real M2 through the end of 1989. Previously, declines of this duration have been followed by recession. However, the predicted decreases in real M2 are relatively small, and are consistent with considerable restraint on domestic demand while the forward momentum of the economy is supported to an important extent in the forecast by improvements in the external sector.

Mr. Chairman, I would like to conclude my briefing with a discussion of a different topic--that of borrowing and federal funds

rate guides to the implementation of policy. In the bluebook, \$600 million of borrowing is associated with federal funds trading in a 8 to 8-1/4 percent range. The lack of a point estimate reflects some uncertainty as to whether the special factors that seem to have been affecting that relationship will persist. The most important of these appears to be expectations that the Federal Reserve will continue to tighten. Such expectations are not surprising given the state of the economy, and our announced intention to err on the side of restraint. In these circumstances, banks may reduce current demands on the discount window in favor of borrowing in the federal funds or other markets, in order to remain in the good graces of the discount officer for when the spread of market over discount rates is even higher. While we attempt to factor this kind of behavior into our estimates, expectations seem to have intensified over each intermeeting period in keeping with data suggesting unanticipated strength in the economy. As a consequence the Desk and the specifications in the bluebook have tended to underestimate the federal funds rate that has accompanied a given borrowing target by around 10 basis points over the period of tightening since late winter.

By themselves, errors of this magnitude have no economic significance. However, Committee members seem increasingly troubled by deviation of federal funds from their expected values, and by the process in which the market anticipates our tightening, pushing up the funds rate; then we validate that anticipation and the market builds in yet another tightening. This process need not be allowed to persist. If the FOMC stuck to its borrowing objective over a sufficient time, expectations would prove to be wrong and the funds rate would ease back. The

FOMC frequently has validated tightening expectations because it did not want to suggest to the market a different course for policy; however, if the markets were wrong about the appropriate course for policy, disappointing them would be only temporarily disruptive, and stabilizing over the long run. That the Committee has chosen not to keep its borrowing objective in the face of market expectations suggests that it has not been dissatisfied with the outcome.

Even so, as a consequence of some dissatisfaction with the process, open market operations have paid greater attention to daily movements in the federal funds rate recently. This has meant that reserves have been added or absorbed when funds approached informal discomfort levels, even if not strictly called for by the reserve objectives. This can be seen in a considerably smaller standard deviation of the funds rate around desk expectations than before the stock market crash. And it is mirrored in larger standard deviations of borrowing around its objective to cushion the effects of short-term shifts in the borrowing function. While funds rate levels and market perceptions have always had a role to play in the timing of open market operations, recently operations seem to be evolving more towards a borrowing objective with a funds rate constraint, and that evolution was particularly marked in the last intermeeting period.

This may be a workable compromise that limits the room for funds rate variations, particularly in situations in which the Committee is concerned about persistent tendencies for tighter or easier money market conditions than the Committee wants, without specifying formally a narrow federal funds target. However, it does have some potential

effects that may need to be considered. At this time it contradicts the public position of the Committee that it has returned to pre-October operating techniques. As a consequence, it may confuse market participants--and we saw some of this in recent maintenance periods when we were on both sides of the market within a few days without major reserve factor revisions. The scope for such confusion widens as some operations are undertaken as rate protests, and some to hit borrowing objectives. More importantly perhaps, it does risk evolving into a more narrow funds rate targeting procedure, if the informal limits are tightened. The Committee has discussed this option several times in recent months, deciding in each case that the discomfort of unanticipated federal funds rate variations was outweighed by the desirable elements of flexibility in the current system. However, recent informal instructions to the Desk may suggest a different assessment of these considerations.